



every 1 000 live births, a mere 10% reduction in 16 years. The corresponding figures for North Africa were 88 and 35 (i.e. 60% reduction). In addition, a woman's lifetime risk of dying during pregnancy and childbirth was 1 in 16 in sub-Saharan Africa; compared with 1 in 3 800 in the developed world. Most maternal deaths in sub-Saharan Africa resulted from maternal haemorrhage, hypertensive disorders of pregnancy, sepsis, abortion, and obstructed labour.^{2,3} Most of these deaths could have been prevented through appropriate reproductive health services before, during and after pregnancy, and through life-saving interventions when complications occur.^{4,5}

Sub-Saharan Africa can increase its pace towards achieving health MDG if efforts to prevent death and disability are tailored to local conditions, given that the causes of death and disability vary considerably.^{2,3,6} Choice of health interventions and policies should be based on solid scientific evidence, and, where it is lacking, we must invest in research.⁷ Such well-informed selection and implementation of effective health care interventions and policies requires close collaboration between policy-makers and researchers.

The SUPPORT (SUPporting Policy-relevant Reviews and Trials) Collaboration is an example of cooperative partnership between researchers and policy-makers in low- and middle-income countries, which started in October 2006. SUPPORT (www.support-collaboration.org) involves partner institutions in sub-Saharan Africa, Latin America, Europe and North America, and aims to improve the use of reliable research evidence in decisions on maternal and child health, and to help fill in the gaps where there is a lack of rigorous evidence. The partner institutions (including the Medical Research Council of South Africa) are preparing summaries of current best evidence on the effectiveness of relevant interventions in a way that is easily accessible to decision makers, developing tools to support access to and use of research evidence to inform policy decisions, supporting the conduct of pragmatic trials of interventions when reliable evidence is lacking, and exploring appropriate ways to disseminate these tools and provide support for the appropriate use of research evidence. The structured summaries will be available by December 2007 and SUPPORT partners conducted a policy-maker workshop in Rosario (Argentina) in November 2006 and have planned others in Harare (Zimbabwe) and Cape Town (South Africa) in September and November 2007 respectively. Workshops comprise interactive presentations and small group sessions during which policy-makers develop skills on how to frame a health problem, identify a systematic review or trial that addresses the problem, and assess the quality and local applicability of the systematic review or trial. Each workshop is planned and facilitated by both policy-makers and researchers, ends with an evaluation, and empowers policy-makers to become informed users of research-based evidence. This knowledge-translation project provides a model of how multi-

national collaborations can be configured and how efficiencies can be gained from cross-continental linkages.

C S Wiysonge T Young

South African Cochrane Centre
Medical Research Council
Cape Town
charles.wiysonge@mrc.ac.za

J Volmink

Faculty of Health Sciences
Stellenbosch University
Tygerberg, W Cape, and
South African Cochrane Centre
Medical Research Council

1. United Nations. The Millennium Development Goals Report 2007. <http://www.un.org/millenniumgoals/pdf/mdg2007.pdf> (last accessed 20 July 2007).
2. Norman R, Bradshaw D, Schneider M, Pieterse D, Groenewald P. Revised Burden of Disease Estimates for the Comparative Risk Factor Assessment, South Africa 2000. Methodological Note. Cape Town: South African Medical Research Council, 2006. <http://www.mrc.ac.za/bod/RevisedBurdenofDiseaseEstimatesJan2007.pdf> (last accessed 20 July 2007).
3. Khan KS, Wojdyla D, Say L, Gülmezoglu AM, Van Look PFA. WHO analysis of causes of maternal death: a systematic review. *Lancet* 2006; **367**: 1066-1074.
4. Kongnyuy EJ, Ngassa P, Fomulu N, Wiysonge CS, Kouam L, Doh AS. A survey of knowledge, attitudes and practice of emergency contraception among university students in Cameroon. *BMC Emerg Med* 2007; **7**: 7.
5. Campbell OM, Graham WJ; Lancet Maternal Survival Series steering group. Strategies for reducing maternal mortality: getting on with what works. *Lancet* 2006; **368**: 1284-1299.
6. Ezzati M, Lopez A, Rodgers A, et al. Selected major risk factors and global and regional burden of disease. *Lancet* 2002; **360**: 1347-1360.
7. Wiysonge CS, Volmink J. Strengthening research capacity. *Lancet* 2002; **359**: 713.

Why no autopsies on marathon deaths?

To the Editor: The July 2007 *SAMJ* featured a report on the deaths of two Comrades Marathon runners.¹ I agree with Mayosi of Groote Schuur Hospital that postmortem examinations should be performed on such cases to establish the cause of death with certainty, in so far as it is possible, because of implications for the surviving next of kin.

We expected that the Forensic Pathology Services in Durban would receive these cases, but neither was referred. Both deaths can be considered unexpected and unexplained sudden deaths, since there are no clear clinical diagnoses (owing to very short survival of only one of them) and both individuals were relatively young. However, the decision to request an autopsy is the duty of the clinician responsible for the patient. It is likely that both these deaths were considered and registered as natural deaths.

There is capacity for diagnostic autopsy examinations on sudden unexpected deaths mainly in the academic *forensic pathology* centres. Where the source of the case is not a public establishment, there is little provision in the academic anatomical pathology unit served by that establishment (now under the National Health Laboratory Service) for a diagnostic autopsy. In these cases, one was declared dead in the medical



tent at the race finish, while the other was certified dead later in a local private hospital.

Previous medico-legal autopsy diagnoses after sport-related deaths in our personal experience in Durban included cardiomyopathy, coronary artery disease, Marfan's syndrome and ruptured cerebral berry aneurysms. It is regrettable that autopsies were not performed in the above cases. Whether they should have been considered natural or unnatural may be debatable, but postmortem examinations could have served to establish the cause/s and mechanism/s of death without need for speculation, and before considerations on their preventability. Routine autopsy examinations in such instances would enlighten issues of familial/genetic study and counselling, scientific research into this area, and for 'selective pre-competition screening' in sport.

Steve R Naidoo

Department of Forensic Medicine
University of KwaZulu Natal, and
Forensic Pathology Services
Department of Health, KwaZulu Natal
Durban
naidoosr@ukzn.ac.za

1. Bateman C. Marathon deaths 'potentially preventable'. *S Afr Med J* 2007; 97: 492-494.

Pre-analytical, analytical and post-analytical considerations in glucose point-of-care testing

To the Editor: Point-of-care (POC) blood glucose monitoring has become an accepted method to evaluate patients in the hospital setting. In most situations, the method is accurate with a short turnaround time, which expedites treatment decisions. The important issue to keep in mind is that any point of care test is subject to pre-analytical, analytical and post-analytical variability.

A case in point: a neonate who presented with prolonged jaundice, liver dysfunction (elevated transaminase, coagulopathy), and renal tubular dysfunction (normal anion gap metabolic acidosis and glucosuria), was treated with insulin after POC glucose values were reported to be above 15 mmol/l. When the patient's condition deteriorated, the POC glucose results were correlated with the laboratory plasma glucose concentrations done on the Beckman LX, using a glucose oxidase ion selective electrode method. The laboratory values were consistently low (discrepant to POC values). The urine showed 4+ galactose and the red cells showed reduced galactose-1-phosphate uridyl transferase (GALT) activity. The patient was diagnosed with galactosaemia.

POC blood glucose meters have evolved rapidly and new-generation meters can exclude many of the previously encountered pre-analytical problems including inadequate

sample volume, improper application and timing, removal of excess blood and lockout function if controls are out of range. Variables that may influence the analytical process include the haematocrit, environmental temperature or humidity, hypoxia, high triglyceride concentrations, and inaccuracy at very high and very low concentrations.¹ Method-specific interferences are also encountered, e.g. the POC device in this case (Roche Accu-Check Active) is a glucose dehydrogenase pyrroloquinolinequinone (GDH-PQQ)-based glucose measuring system. This system is not specific for glucose and may give false elevated glucose values in the presence of maltose, xylose or galactose (Accu-Check Active test strips package insert). Post-analytical factors that influence the interpretation of the result are whether a plasma or serum value is reported and the unit in which the result is reported. Recently, an International Federation of Clinical Chemistry (IFCC) working group recommended that all meters must be harmonised to the concentration of glucose in plasma, irrespective of the type of sample used.^{1,2}

When a POC device is used, the clinician should always familiarise himself with the test method and the influence of possible interferences on the method. Methods using glucose dehydrogenase with NAD as co-factor (GDH-NAD), hexokinase or glucose oxidase are specific for glucose and do not exhibit interference as a result of interfering sugars.³

Madelene Jacobsz Marita Dednam

Chemical Pathology
University of Pretoria
marita.dednam@med.up.ac.za

1. Sacks DB, Brun DE, Goldstein DE, Maclaren NK, McDonald JM, Parrott M. Guidelines and recommendations for laboratory analysis in the diagnosis and management of diabetes mellitus. *Clin Chem* 2002; 48: 436-472.
2. D'Orazio P, Burnett RW, Fogh-Andersen N, et al. Approved IFCC recommendation on reporting results for blood glucose (Abbreviated). *Clin Chem* 2005; 51: 1573-1576.
3. Newman JD, Ramsden CA, Balazs NDH. Monitoring neonatal hypoglycaemia with the Accu-check Advantage II glucose meter: The cautionary tale of galactosemia (Letter). *Clin Chem* 2002; 48: 2071.

Hypertension: Holding on to your ACEs may be a good bet

To the Editor: The recently published South African Hypertension Guideline¹ provides a comprehensive review of the causes and risks of abnormal blood pressure and of its treatment, but falls short of offering a cost-effective approach to managing the burden. Understanding the causes of hypertension, the morbidity associated with it, and the effective treatments are necessary, but not sufficient, conditions for a cost-effective programme.^{2,3} Also, adding to the debate, one has to look at this from another perspective.

In clinical practice, it is often assumed that angiotensin receptor blockers (ARBs) and angiotensin-converting enzyme